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1-06-03

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT(S): STARK, Moshe                      EXAMINER:                      BALLENGER, S.  
SERIAL NO.: 09/993,917                      GROUP ART UNIT: 2621  
FILED: November 27, 2001                      Attorney Docket No.: P-3236-US  
FOR.: PROGRAMMABLE RESOLUTION CMOS IMAGE SENSOR

ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

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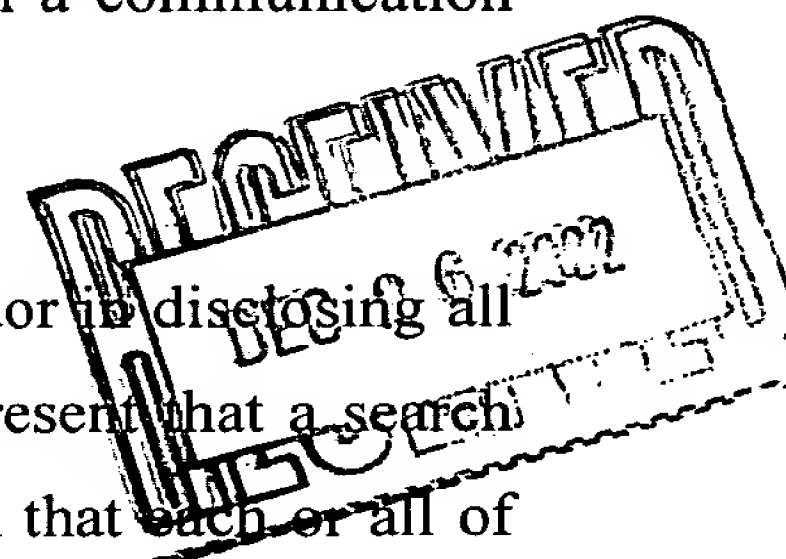
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**INFORMATION DISCLOSURE STATEMENT**

Pursuant to 37 C.F.R. §§1.56, 1.97 and 1.98, this Information Disclosure Statement includes:

1. ☒ Documents including patents, publications, and other information listed on the attached Form PTO-1449 for consideration by the Examiner;
2. ☐ Form PTO-1449 which lists documents including patents, publications and other information for consideration by the Examiner but in accordance with 37 C.F.R. 1.98(d) does not include those documents which have been previously cited or submitted to the Patent Office in the following prior application U.S. Serial No. \_\_\_\_\_, filed \_\_\_\_\_ which is properly identified and relied on.
3. ☐ Other information for the Examiner's consideration which was cited in a communication from a foreign patent office in a counterpart foreign application.

The information herein cited is only in fulfillment of Applicant(s) duty of candor in disclosing all information brought to Applicant(s) attention. This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art". If it should be determined that any of the listed documents do not constitute "prior art" under United States law, Applicant(s) reserve the



right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant(s) further reserve(s) the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

In accordance with MPEP Sections 609 and 707.05(b), it is requested that each and every document cited (including any cited in applicant's specification which is not repeated on the attached Form PTO-1449) be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing on Form PTO-1449. Such initialing is requested even if the Examiner does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application and is evidence that the Examiner has considered the document.

This Information Disclosure Statement is being filed:

I) ☒ Within three (3) months of filing the subject Application or entry of the subject Application into the national stage or before mailing of the first Office Action on the merits whichever event occurs last pursuant to of 37 C.F.R §1.97 (b); or

II) ☐ After the period specified in (I) but before the mailing date of either a final Official Action under 37 C.F.R §1.113 or a notice of allowance under 37 C.F.R §1.311 whichever occurs first;

1. ☐ The undersigned hereby states that each item of information listed on the Form PTO-1449 was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three (3) months prior to the filing of this Information Disclosure Statement; or

2. ☐ the undersigned hereby authorizes the Patent Office to charge the fee in the amount of \$180.00 under 37 C.F.R §1.17 (p) to Deposit Account 05-0649.

III) ☐ After the period in (I) and (II) but before the payment of the issue fee,

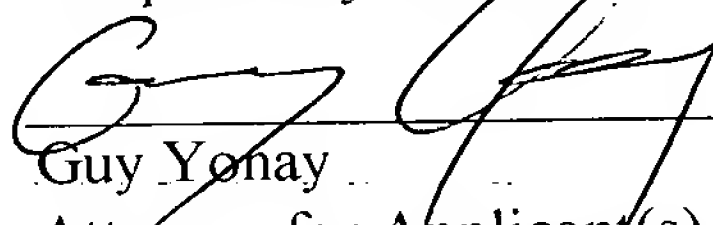
1. The Undersigned hereby states:

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- b) ☐ that no items of information contained in Form PTO-1449 was cited in a communication from a foreign patent office in a counterpart foreign application, and to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement; and
2. ☐ The Undersigned hereby authorizes the Patent Office to charge the Petition fee in the Amount of \$180.00 under 37 C.F.R §1.17 (p) to Deposit Account 05-0649.

**Except** for issue fees payable under 37 C.F.R. §1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 05-0649.

Respectfully submitted,

  
Guy Yonay  
Attorney for Applicant(s)  
Registration No. 52,388

Dated: November 17, 2002

**Eitan, Pearl, Latzer & Cohen Zedek, LLP.**  
10 Rockefeller Plaza, Suite 1001  
New York, New York 10020  
Tel: (212) 632-3480  
Fax: (212) 632-3489

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INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

1

of

4

Application Number

09/993,917

Filing Date

November 27, 2001

First Named Inventor

STARK, Moshe

Group Art Unit

2621

Examiner Name

BALLENGER, S.

Attorney Docket Number

P-3236-US

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	AA	5,452,004		Roberts	09-19-1995	
	AB	5,841,126		Fossum et al.	11-24-1998	
	AC	4,472,638		Nishizawa et al.	09-18-1984	
	AD	5,694,495		Hara et al.	12-02-1997	
	AE	6,166,367		Cho	12-26-2000	
	AF	6,091,449		Matsunaga et al.	07-18-2000	
	AG	6,115,065		Yadid-Pecht et al.	09-05-2000	
	AH	5,481,301		Cazaux et al.	01-02-1996	
	AI	5,896,172		Korthout et al.	04-20-1999	
	AJ	5,351,309		Lee et al.	09-27-1994	
	AK	5,856,667		Spirig et al.	01-05-1999	
	AL	6,078,037		Booth, Jr.	05-20-2000	
	AM	5,264,944		Takemura	11-23-1993	
	AN	5,541,402		Ackland et al.	07-30-1996	
	AO	5,576,763		Ackland et al.	11-19-1996	
	AP	5,739,562		Ackland et al.	04-14-1998	
	AQ	5,835,141		Ackland et al.	11-10-1998	
	AR	5,841,159		Lee et al.	11-24-1998	
	AS	5,881,159		Aceti et al.	03-09-1999	
	AT	4,758,734		Uchida et al.	07-19-1988	
	AU	5,854,498		Merrill	12-29-1998	
	AV	5,227,313		Gluck et al.	07-13-1993	
	AW	5,291,294		Hirota	03-01-1994	
	AX	5,969,759		Morimoto	10-19-1999	
	AY	5,060,245		Nelson	10-22-1991	
	AZ	5,396,091		Kobayashi et al.	03-07-1995	
	BA	5,650,352		Kamasz et al.	07-22-1997	
	BB	6,300,977		Waechter et al.	10-09-2001	
	BC	5,742,659		Atac et al.	04-21-1998	

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	BD	WO	97/17800		Yadid-Pecht et al.	05-15-1997		<input type="checkbox"/>
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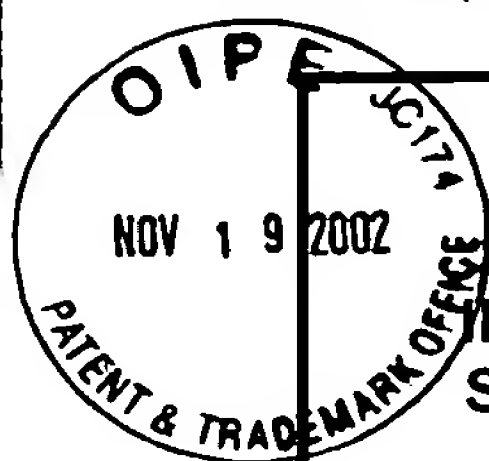
<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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		Application Number	09/993,917
		Filing Date	November 27, 2001
		First Named Inventor	STARK, Moshe
		Group Art Unit	2621
		Examiner Name	BALLENGER, S.
Sheet <b>2</b>	Of <b>4</b>	Attorney Docket Number	P-3236-US

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	BE	Orly Yadid-Pecht et al. "Wide Intrascene Dynamic Range CMOS APS Using Dual Sampling," <i>IEEE Trans. On Electron Devices</i> , Vol. 44, No. 10, Oct. 1997, pp. 1721-1723	<input type="checkbox"/>
	BF	Orly Yadid-Pecht et al., "CMOS Active Pixel Sensor Star Tracker with Regional Electronic Shutter," <i>IEEE Journal of Solid State Circuits</i> , Vol. 32, No. 2, Feb. 1997, pp. 285-288	<input type="checkbox"/>
	BG	Orly Yadid-Pecht et al., "Wide Dynamic Range APS Star Tracker," <i>SPIE</i> , Vol. 2654, 1996, pp. 82-92	<input type="checkbox"/>
	BH	Christopher Clark et al., "Application of APS Arrays to Star and Feature Tracking Systems," <i>SPIE</i> , Vol. 2810, 1996, pp. 116-120	<input type="checkbox"/>
	BI	Orly Yadid-Pecht et al., "A Random Access Photodiode Array for Intelligent Image Capture," <i>IEEE Transactions on Electron Devices</i> , Vol. 28, no. 8, Aug. 1991, pp. 1772-1780	<input type="checkbox"/>
	BJ	Sarit Chen et al., "Adaptive Sensitivity CCD Image Sensor," <i>SPIE</i> , Vol. 2415, 1995, pp. 303-309	<input type="checkbox"/>
	BK	G.P. Weckler, "Operation of p-n junction photodetectors in photon flux integration mode," <i>IEEE JSSC</i> , vol. SC-2, no. 3, Sept. 1967	<input type="checkbox"/>
	BL	R. Dyck and G. Weckler, "Integrated arrays of silicon photodetectors for image sensing," <i>IEEE Trans. Electron Devices</i> , vol ED-15, no. 4, April 1968 196-201	<input type="checkbox"/>

<b>Examiner Signature</b>	<b>Date Considered</b>
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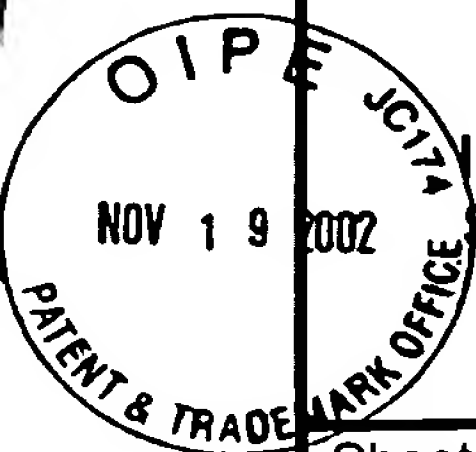
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Sheet <span style="border: 1px solid black; padding: 0 5px;">3</span>	of <span style="border: 1px solid black; padding: 0 5px;">4</span>	Attorney Docket Number	P-3236-US

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	BM	J.I. Nakamura et al., "CMOS active pixel image sensor with simple floating gate pixels," <i>IEEE Trans. Electron Devices</i> , Vol. 42, No. 9, Sept, 1995, pp. 1693-1694	<input type="checkbox"/>
	BN	E-S Eid et al., "A 256 x 256 CMOS active pixel image sensor," <i>SPIE</i> , vol. 2415, Sept. 1995	<input type="checkbox"/>
	BO	H. Yamashita et al., "A 2/3-in 2 million pixel STACK-CCD HDTV imager," <i>IEEE JSSC</i> , Vol. 30, no. 8, August 1995, pp. 881-889	<input type="checkbox"/>
	BP	R.H. Nixon et al., "256 x 256 CMOS active pixel sensor camera-on-a-chip," <i>IEEE JSCC</i> , Vol. 31, No. 12, December 1996	<input type="checkbox"/>
	BQ	B. Dierickx et al., "Random addressable active pixel image sensors," <i>SPIE</i> , vol. 2950, August 1996, pp. 2-7.	<input type="checkbox"/>
	BR	D. Scheffer et al., "Random addressable 2048 x 2048 active pixel image sensor," <i>IEEE Trans. Elec. Devices</i> , Vol. 44, no. 10, Oct. 1997, pp. 1716-1720.	<input type="checkbox"/>
	BS	T. Nomoto et al., "A 4M-pixel CMD image sensor with block and skip access capability," <i>IEEE Trans. Electron. Devices</i> , vol. 44, no. 10, Oct. 1997, 1738-1746	<input type="checkbox"/>

Examiner Signature	Date Considered
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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

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First Named Inventor	STARK, Moshe
Group Art Unit	2621
Examiner Name	BALLENGER, Technology Center 2600
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### OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

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	BT	Y. Iida et al., "A ¼-inch 330k square pixel progressive scan CMOS active pixel image sensor,"  <i>IEEE JSSC</i> , vol. 32, no. 11, Nov. 1997, pp. 2042-2047	<input type="checkbox"/>
	BU	S. Ohsawa et al., "Analysis of low fixed pattern noise cell structures for photconversion layer overlaid CCD or CMOS image sensors," <i>IEEE Trans. electron. Devices</i> , vol. 44, no. 10, Oct. 1997	<input type="checkbox"/>
	BV	S. Kemeny et al., "CMOS active pixel sensor array with programmable multiresolution readout,"  <i>JPL</i> , California Institute of Technology, 1994	<input type="checkbox"/>
	BW	Chamberlain S.G. and Lee J.P., "A Novel Wide Dynamic Range Silicon Photodetector and Linear Imaging Array", <i>IEEE Transactions on Electron Device</i> , Vol. Ed. 31, No. 2, February 1984, pp. 175 - 182.	<input type="checkbox"/>
	BX	Delbruck T. and C. Mead, "Analog VLSI Phototransduction by Continuous-Time, Adaptive, Logarithmic Photoreceptor Circuits", Tech. Rep. California Institute of Technology, Pasadena  California 91125, 1994. URL: <a href="http://www.pcmp.caltech.edu/anaprose/tobi/recep/">http://www.pcmp.caltech.edu/anaprose/tobi/recep/</a>	<input type="checkbox"/>

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